

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the applications.

Please cancel claim 1 without prejudice or disclaimer.

Listing of the Claims:

1-25 (Canceled)

26. (New) An array of oligonucleotides, the array comprising:
- (a) a planar solid support having at least a first surface; and
 - (b) at least 1000 different oligonucleotide probes attached to the first surface of the solid support in an area of less than 1 cm^2 , wherein each of the different probes is attached to the surface of the solid support in a different localized area, each probe has a different determinable sequence and each probe is complementary to a linking oligonucleotide.
27. (New) The array of claim 26, wherein each different oligonucleotide probe is at least about 5 nucleotides in length.
28. (New) The array of claim 27, wherein each different oligonucleotide probe is at least 10 nucleotides in length.
29. (New) The array of claim 26, wherein each different oligonucleotide probe is 2-100 nucleotides in length.
30. (New) The array of claim 26, wherein the array comprises at least 3,000 different oligonucleotide probes attached to the first surface of the solid support in an area of less than 1 cm^2 .

31. (New) The array of claim 26, wherein the array comprises at least 10,000 different oligonucleotide probes attached to the first surface of the solid support in an area of less than 1 cm^2 .
32. (New) The array of claim 26, wherein each of the different localized areas is physically separated from each of the other localized areas.
33. (New) The array of claim 26, wherein each linking oligonucleotide hybridizes in a complementary fashion to probes on the array.
34. (New) The array of claim 26, wherein the linking oligonucleotides are attached to reagents.
35. (New) The array of claim 26, wherein the support comprises a silicon containing substrate.
36. (New) The array of claim 26, wherein the support is glass.
37. (New) The array of claim 26, wherein the support is selected from the group consisting of membranes, beads and fibers.
38. (New) The array of claim 34, wherein the reagents may be attached to the array by hybridization of the linking oligonucleotide to the complementary probe on the array.
39. (New) The array of claim 38, wherein a plurality of different reagents are spatially attached at different locations via hybridization between a probe on the array and a specifically complementary oligonucleotide attached to the reagent.
40. (New) An array of oligonucleotides, the array comprising:
(a) a planar solid support having at least a first surface;

(b) at least 1000 different oligonucleotide probes attached to the first surface of the solid support in an area of less than 1 cm^2 , wherein each of the different probes is attached to the surface of the solid support in a different localized area, each probe has a different determinable sequence and each probe is complementary to a linking oligonucleotide; and

(c) a plurality of different reagents spatially attached at different locations via hybridization between a probe on the array and a specifically complementary oligonucleotide attached to the reagent.

41. (New) The array of claim 40, wherein each different oligonucleotide probe is at least about 5 nucleotides in length.

42. (New) The array of claim 41, wherein each different oligonucleotide probe is at least 10 nucleotides in length.

43. (New) The array of claim 40, wherein each different oligonucleotide probe is 2-100 nucleotides in length.

44. (New) The array of claim 40, wherein the array comprises at least 3,000 different oligonucleotide probes attached to the first surface of the solid support in an area of less than 1 cm^2 .

45. (New) The array of claim 40, wherein the array comprises at least 10,000 different oligonucleotide probes attached to the first surface of the solid support in an area of less than 1 cm^2 .

46. (New) The array of claim 40, wherein each of the different localized areas is physically separated from each of the other localized areas.

47. (New) The array of claim 40, wherein each linking oligonucleotide hybridizes in a complementary fashion to probes on the array.

48. (New) The array of claim 40, wherein the linking oligonucleotides are attached to reagents.

49. (New) The array of claim 40, wherein the support comprises a silicon containing substrate.

50. (New) The array of claim 40, wherein the support is glass.

51. (New) The array of claim 40, wherein the support is selected from the group consisting of membranes, beads and fibers.